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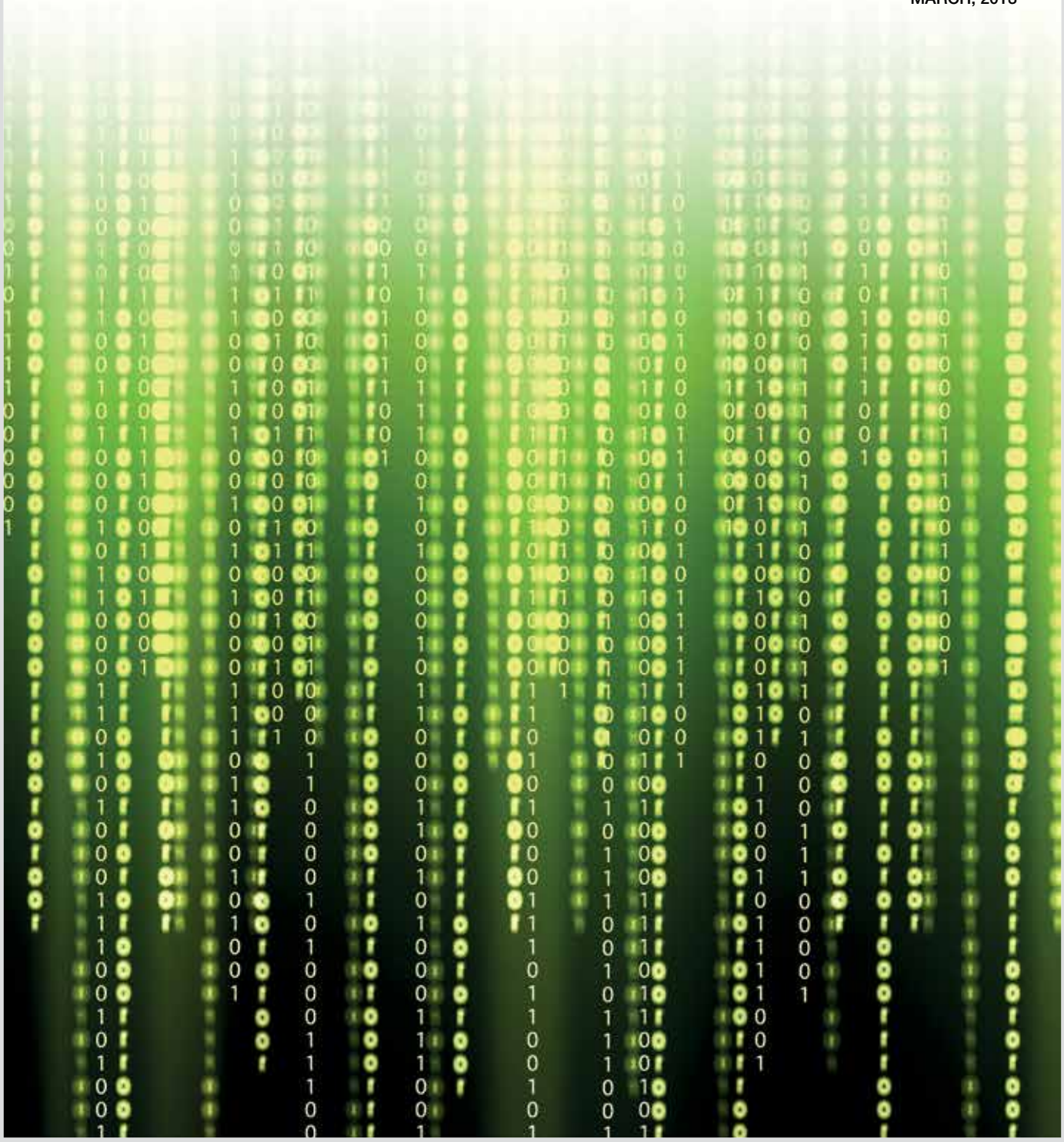
BIG DATA – BEYOND THE HYPE

A Study by Interxion

MARCH, 2013

FOREWORD

Big data, along with cloud computing, is a term that has come to dominate current IT industry debate. With the continued rise of smartphones, tablets and social networks, and an ever increasing proportion of business processes becoming digitised, we all see evidence of the vast amounts of data that these transactions and communications produce.

At its simplest level, big data describes the challenge of extracting better insights from the information flowing in, out and through corporate and organisational networks. In theory, this intelligence could hold the key to any number of performance improvements, such as reducing customer churn, increasing sales or eliminating inefficiencies.

While much has been made about the commercial potential of big data, concrete examples of projects being executed are, outside the scientific world, relatively thin on the ground. Getting big data right demands the effective orchestration of a broad set of variables. On the one hand we have the cultural challenge of operating across a broad range of business functions – for instance, sales, customer service and finance – to paint a complete picture of inter-connected operations. On the other hand, there is the technological challenge of combining hardware, software and the network to deliver a platform capable of crunching through big data sets.

Looked at purely from a technological perspective, addressing this challenge calls for a strategic vision underpinned by a long-term plan. Anecdotal evidence suggests, however, that despite the desire of IT departments to take a more strategic approach, the day-to-day demands of the business sees them driven by short-term reactive pressures.

At Interxion, we wanted to get a real understanding of the current state of play in how businesses were tackling big data, if at all. In our report, *Big Data – Beyond the Hype*, we explore some of the following themes as revealed by interviews with 750 European IT decision makers (Vanson Bourne) in the UK, France, Germany, the Netherlands, Spain, Belgium, Denmark, Sweden, Austria, Switzerland, and Ireland:

- The appetite and capability of business to capitalise on big data
- The ability of IT departments to take the necessary long-term view to make big data a success
- Restrictions on IT's capacity to deliver big data programmes
- The robustness of the business case and expected commercial benefits for big data

The study has unearthed some interesting perspectives. We trust you will get as much from its findings and insights as we have.

Best wishes,

Ian McVey

DIRECTOR OF MARKETING AND BUSINESS DEVELOPMENT, ENTERPRISE AND SYSTEMS INTEGRATOR SEGMENT

IN THIS REPORT

THE BUSINESS CASE FOR BIG DATA

Big data is commonly understood to mean the mining of huge data sets to deliver actionable intelligence and commercial advantage. Enterprise data sets hold a wealth of information on areas such as customer behaviour and interactions, supply chain movements and financial transactions. According to the underlying premise of big data, effective analysis of this information should expose a whole host of underlying trends, patterns and insights that can be used to the business's advantage.

Despite all the media and industry clamour around big data however, relatively few businesses have managed to find a role for it in their own operations: just a quarter of businesses have explored and made a successful business case for big data. Nonetheless, its application is being widely considered, with 81% of organisations either already having explored big data or planning to do so.
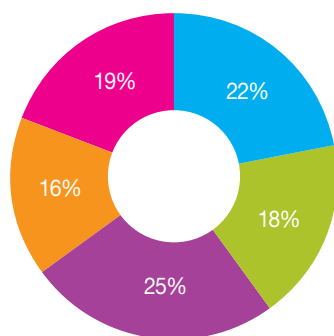
- 25% of businesses have explored and made a successful business case for big data
- The application of big data is being widely considered with a further 56% of organisations having explored the business case or planning to do so

THE INTERXION VIEWPOINT

"The results indicate that we are still in the early phases of the adoption cycle for big data. As we hear more and more about successful applications though, organisations will start to learn from each other and we can expect to see the volume of big data programmes – based on robust commercial analysis – really ramp up."

Which of these best describes your organisation's position on big data?

- We are exploring how big data could benefit our organisation but are yet to build a business case
- We have explored how big data could benefit our organisation and could not find a business case
- We have explored how big data could benefit our organisation and have developed a business case
- We have not explored how big data could benefit our organisation but do have plans to do so
- We have no plans to explore how big data could benefit our organisation
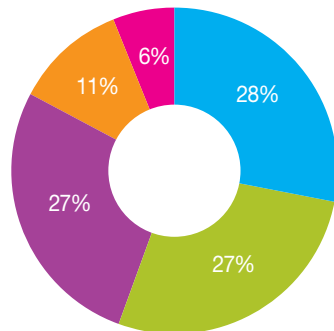

22%
18%
25%
16%
19%

THE STRUGGLE TO TAKE A STRATEGIC VIEW

Capitalising on the opportunities presented by big data entails the co-ordination of a number of cultural, organisational and technological facets. And uniting and harnessing these elements in support of commercial objectives requires that IT departments are closely aligned with long-term business plans.

Big Data – Beyond the Hype reveals the struggle faced by IT departments in achieving this: a third of businesses agreed that their department fails to take a proactive, long-term and strategic approach. There were some significant differences between countries in their responses though: while 51% of French companies and 43% of UK firms acknowledge the challenge, this was true of just 15% of German respondents.

This was closely followed by budgets getting tighter (69%) as well as the fact that just over half of IT departments (53%) don't have any insight into the long-term plan for the business. In fact, a quarter of respondents (24%) said that their department doesn't have a plan in place to support the business plan at all.

- IT departments spend on average 37% of their time firefighting – but with big differences across the countries
- A third of firms struggle to take a proactive, long-term and strategic approach to their IT
- The main reason for the difficulty in taking a long-term view is having to deal with short-term business requirements (cited by 80%)
- 24% of IT departments have no plan in place to support the business
- 38% of CIOs report into either the CFO or the COO, rather than the CEO or the board

What is your opinion on the following statement: My department struggles to take a proactive and long-term strategic view?

- Neither agree nor disagree
- Agree
- Disagree
- Strongly disagree
- Strongly agree

28% / 27% / 27% / 11% / 6%

The time constraints faced by European IT departments is a major contributing factor to this: 99% of respondents said they spend at least some of their time fighting fires rather than carrying out proactive, strategically important work that would benefit the company, with an average 37% of time spent in this way. Given this background, it comes as little surprise that, when asked why they are struggling to take a long-term view, the most common answer from respondents was that they always have to deal with short-term reactive business requirements (80%).

THE INTERXION VIEWPOINT

"In making big data work for an organisation, it's vital that IT departments and their priorities reflect the commercial objectives of the business. It's not surprising that relatively few organisations have succeeded in building a business for big data, if IT teams are not tuned into what the business is trying to achieve over the longer-term. The reporting line of the CIO is key here. How can the CIO take a strategic view without reporting into the CEO or the board?

Businesses need to consider what they should ask of their IT teams. If all they're looking for is maintaining the plumbing and keeping costs down, they may find that those competitors who ask IT to deliver competitive advantage are stealing a march."

BIG DATA – A STRATEGIC PROPOSITION

Interestingly, companies where the IT strategy is aligned with the business plan are much more likely to have explored the possibilities of big data: more than nine in ten organisations where the IT plan is closely mapped to the business plan have already explored the business case for big data. Where the IT strategy is not aligned to the business plan, either because it does not plan that far ahead or is designed to fulfil other goals, fewer than six in ten organisations have explored big data. This drops even further to 40% in those businesses where the long long-term strategic plan has not been shared with IT.

- In firms where the IT strategy is aligned with the business plan, more than 9 in 10 have already explored the business case for big data
- In companies where the long-term business plan has not been shared with IT, only 40% of firms have explored the business case

THE INTERXION VIEWPOINT

"These results clearly demonstrate that those forward-thinking companies who are working in sync with their IT departments are more alert to the opportunities presented by the application of emerging technologies. For these firms, it's incredibly important for the IT department to think ahead and lay the foundations for any future applications of big data that may provide the business with competitive advantage."
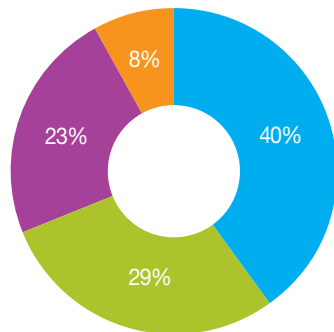
WHERE CHALLENGE MEETS OPPORTUNITY

Big data is seen as both an opportunity and a challenge for the business and the IT department, but it is small companies where the challenge is most keenly felt. 79% of businesses with between 501 and 1000 employees say their IT departments see big data as a significant challenge, compared with only 55% of organisations with more than 3000 employees.

To what extent is big data perceived as a challenge by your organisation's business and IT? My organisation's business regards big data as…
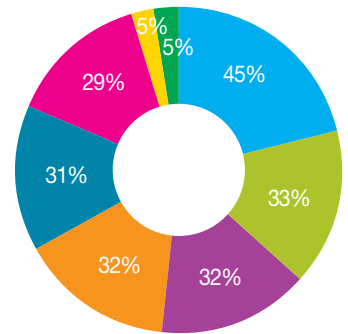
- A moderate challenge
- A significant challenge
- A minor challenge
- Not a challenge at all

When asked about the challenges involved in building a big data solution, almost half (45%) of respondents said that there are more pressing demands on the IT department's time, while a third cited reluctance to invest in the CAPEX needed (33%), a lack of storage capacity (32%) and a lack of expertise in-house (32%).

What challenges would you face in building a big data solution in-house?

- There are more pressing demands on the IT department
- The business is unwilling to invest in the capital expenditure needed
- We do not have the storage capacity
- We don't have the expertise in the organisation and / or it's too expensive to hire it in
- Legacy technology
- Requirement for solution to be accessed across multiple device types/platforms
- Not applicable – we have already built a Big Data solution in-house
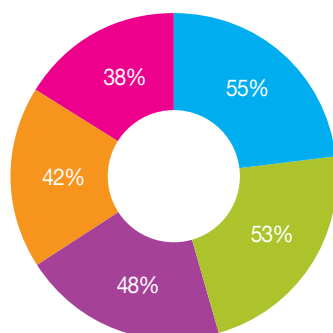- None

In terms of the technology required to deliver big data solutions, it's no surprise that analytics (55%) and storage (53%) are the biggest concerns. Significantly, the network comes a close third, with almost half (48%) of respondents admitting that they are extremely concerned about this issue as it relates to the speed of accessing, processing and delivering information. This makes sense when you consider that 58% of organisations expect to need their big data to reach the end-user within 100 milliseconds.

How concerned are you with the following issues as they relate to big data? Combination grid combining the totals of those who rated '4 - concerned' and '5-extremely concerned'

- Analytics
- Long-term storage
- Speed of accessing, processing and delivering information – network
- Speed of accessing, processing and delivering information – hardware
- Speed of accessing, processing and delivering information – software

55%
53%
48%
42%
38%

- Key challenges in building a big data solution include more pressing demands on IT's time (cited by 45%), reluctance to invest in the CAPEX needed (33%), lack of storage capacity (32%) and lack of expertise in-house (32%)
- Analytics (selected by 55%), storage (53%) and network (48%) are the key technological considerations in building a big data solution
- 58% of organisations expect to need their big data to reach the end-user within 100 milliseconds

THE INTERXION VIEWPOINT

"It's not surprising that storage and analytics are seen as crucial to big data, but the results also highlight that the capabilities of the underlying network should not be overlooked. If the network can't access, process and deliver information at the speed required, then the data-crunching power of the systems sitting above it are irrelevant. Big data solutions require a cross-section of three disciplines: business, IT and telecoms, which are often left siloed with no collaboration between them."
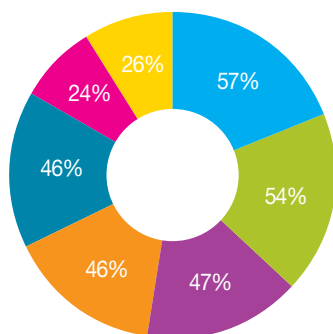
EXPECTED BENEFITS

Irrespective of the challenges presented by big data, the study's respondents also recognised that big data was capable of delivering a broad range of business benefits: better decision making (57%), improved customer satisfaction (54%), more cross-selling (47%), bringing new products and services to market more quickly (46%) and innovation (46%) all scored highly.

If money and resources presented no barriers, what benefits do you believe the strategic and effective use of big data could bring to your organisation?
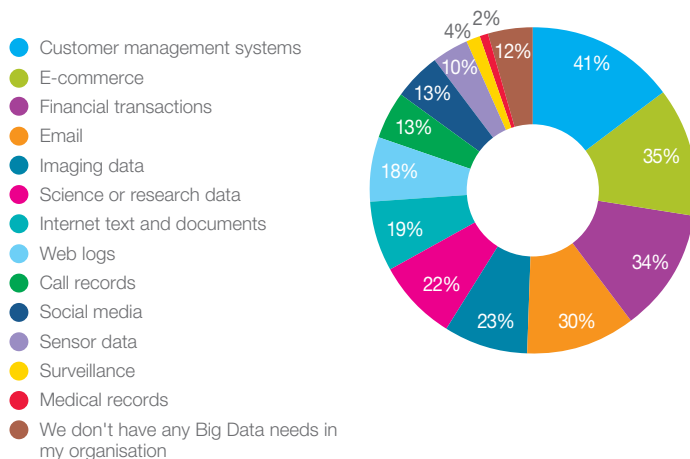
- Better decision making across the organisation
- Improve our levels of customer satisfaction
- Improve our sales figures through better cross-selling and up-selling
- Bring new products and services quicker to market
- More innovation
- Better corporate compliance and governance
- Increase workforce productivity

These understood business benefits were reflected to some extent in the applications driving big data needs at respondents' organisations: customer management systems (41%), e-commerce (35%) and financial transactions (34%) came out on top.

- Anticipated business benefits of big data include better decision making (57%), improved customer satisfaction (54%), more cross-selling (47%), bringing new products and services to market more quickly (46%) and innovation (46%)

Which are the 3 applications that are driving big data needs most at your organisation?

- Customer management systems
- E-commerce
- Financial transactions
- Email
- Imaging data
- Science or research data
- Internet text and documents
- Web logs
- Call records
- Social media
- Sensor data
- Surveillance
- Medical records
- We don't have any Big Data needs in my organisation

THE INTERXION VIEWPOINT

"It seems that respondents believe that big data could help them to do better at whatever is best for their business. Given the widespread acknowledgement of big data's potential, businesses should create the space for their IT teams to focus on how to overcome the challenges that prevent them from realising this.
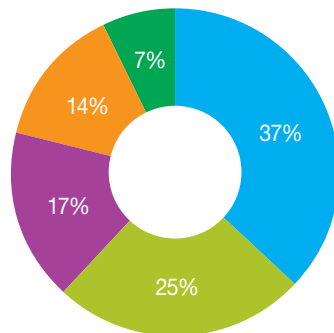
Organisations should also consider their innovation process and how this applies to big data implementations. The skills required are a necessary mix of industry domain knowledge, mathematical and computational skills, and a good understanding of the technology capability. Unless companies have a carefully thought-out innovation process in place, it's rare to see these three skills working in harmony."

A GROWING
PRIORITY

Although only 7% of respondents believe that big data is already a priority for their organisation, this is set to change dramatically, with a further 62% convinced that it will become a priority within the next 3 years.

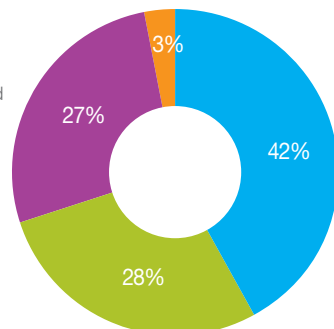**Would you say that big data is/will be a priority for your organisation in the next…?**

- ● Will be a priority within 3 years
- ● Will be a priority within 12 months
- ● Will not become a priority for my organisation within 5 years
- ● Will be a priority within 5 years
- ● Already a priority for my organisation

7%
14%
37%
17%
25%

When it comes to building the business case, 42% of respondents expect this to be based on developing new data sets and applying new analytics to them, compared to only 28% who think this will come from bringing together old and new data sets to provide new insights and understanding and 27% who think better mining existing data sets will be the key.

How have you/do you expect to be able to build a business case for big data?

- ● In developing new data sets and applying new analytics to them
- ● By bringing together old and new data sets to provide us with new insights and understanding
- ● By better mining existing data sets
- ● We do not expect to be able to build a business case for Big Data

3%
27%
42%
28%

- • 62% of firms expect big data to become a priority within the next three years

THE INTERXION VIEWPOINT

"Although big data is still in the hype cycle stage, it's clear that the challenges posed by the volume, velocity and variety of data will become increasingly important over the next few years. If organisations already know that that's the case, then they need to factor big data into their planning now. The decisions they make about systems, networks and applications will have a big impact on their ability to deliver big data programmes when their organisation finds it requires them."

REGIONAL DIFFERENCES
ACROSS EUROPE

The importance of big data as a means for competitive advantage for companies may also be true for countries across Europe. Our report shows interesting results in the attitudes to big data across the eleven countries surveyed.

Businesses in larger markets are generally less constrained by budget cuts, with only 47% of German respondents and 57% of Spanish respondents agreeing that their budgets are getting tighter, compared to 68% in Austria, Switzerland, Belgium and the Netherlands and 71% in Denmark and Sweden. IT departments in the UK and Ireland are under the most budgetary pressure, with 82% suffering from tighter budgets. Tighter budgets go hand-in-hand with a focus on 'fire-fighting' with a higher percentage of respondents acknowledging this in smaller markets.

Consequently, businesses in the smaller markets in Europe are less likely to have a long-term strategy, with respondents from Belgium and The Netherland (27%), Denmark and Sweden (28%) and Austria and Switzerland (31%) far more likely to admit that they don't have a plan in place. In contrast, very few organisations in Germany (2%), France (7%) and Spain (9%) are without a long-term plan.
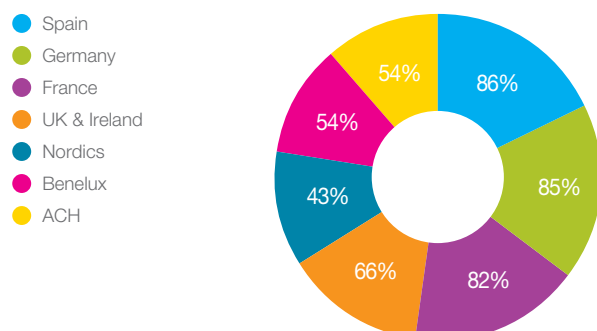
This split carries across into whether organisations see big data as a priority. Fewer businesses in Denmark and Sweden, Austria and Switzerland and Belgium and The Netherlands see big data as a priority within five years (averaging 33%, 32% and 27% respectively). It is the larger Spanish (83%), French (80%) and German (78%) markets where more businesses are ready to prioritise big data within the next three years.

THE INTERXION VIEWPOINT

"Drilling down into the regional data confirms that big data is a strategic proposition. There is a clear dichotomy between those smaller markets where organisations are less likely to have a strategic plan in place and the larger markets where a long-term plan corresponds with big data being a more immediate priority for businesses. While Spain, France and Germany are leading the way with long-term plans in place pretty much across the board, there are some organisations in the smaller markets that are starting to consider big data. With European countries collaborating and competing for economic advantage, it may be those who enable the conditions for big data to flourish that reap the economic reward and those who don't may trail behind, creating a European 'digital divide."

Would you say that big data will be a priority within 3 years?

- Spain
- Germany
- France
- UK & Ireland
- Nordics
- Benelux
- ACH

Spain 86%
Germany 85%
France 82%
UK & Ireland 66%
Nordics 43%
Benelux 54%
ACH 54%

IN SUMMARY

Looking through *Big Data – Beyond the Hype* in its entirety, the study provides a great deal of food for thought for firms considering how to tackle big data.

We have discovered that big data is a strategic proposition with those IT departments that are aligned with long-term business plans better able to assess its merits. We also found however that a large number of IT departments are constrained in their ability to be strategic, either because they're charged with cutting costs, offering a reactive service or have no visibility of the long-term direction and objectives of the company.

Time and again, we see those organisations that take a strategic approach to IT delivering faster growth and greater shareholder value, so it's puzzling to see that many businesses are still missing out on this competitive advantage.

It's understandable that, in today's tough economic climate, reduced resources and stretched teams can result in a focus on the urgent rather than the important. The question though is 'what is the opportunity cost?' Lack of resources in the long run destroys shareholder value. Creating the headroom to assess the merits of big data is vital for a company's competitive advantage. Those companies that do will win out. Those that don't will trail behind.

This is also true for pan-European country competitiveness. Businesses in the smaller countries by GDP face tightening budgets, an increased focus on 'fire-fighting' and are less likely to have a long-term strategic plan in place. They are therefore correspondingly less likely to see big data as a priority in the next five years, when compared with businesses in larger countries such as France, Spain and Germany.

What is also clear from the study is that big data is set to remain for a good while longer at the top of the enterprise IT agenda. A comfortable majority of respondents recognise that big data will become a growing priority for them and acknowledge the need to harness its capabilities for the good of the business.

In order to capitalise on the benefits that respondents anticipate, it's crucial to make the right choices now and ensure that all the elements are in place for a successful big data solution. Establishing an innovation process that brings together multi-disciplinary teams is vital at the same time as allowing those teams the headroom to focus on the big data task at hand. Given the focus is currently on analytics and storage, those organisations that forget network speed in the context of a big data solution are missing a trick for the future. Choices about systems, networks and applications made today will have a big impact on the ability to deliver big data programmes down the line, so it's imperative to involve all three relevant disciplines: business, IT and telecoms.

At Interxion, we believe that if big data is a strategic proposition, so too is where you 'house' your big data solution. Making the wrong choice today could tie your company to a poor-performing solution which in the long run could see you lose out to competitors who have made the right choice. Picked as a key consideration by 48% of our respondents, connectivity is the third most important challenge they face, with 58% agreeing that their big data solution will need to reach the end-user within 100ms.

Meeting the requirements of volume, variety and velocity calls for the solution to be located in a highly-connected data centre facility. What are the implications of a large volume of data going across a WAN? Would the cost prohibit the business case? What if you need to be colocated to a large variety of datasets? And finally, when it comes to velocity, what if the network aspect of your solution resulted in delivering results 'just too late' rather than 'just in time'? At Interxion we have over 450 carriers in our 33 data centres across Europe. This gives you the opportunity to 'connect, transact and create value' from your big data solution, within 100ms of 70% of Europe's GDP.

We hoped you've enjoyed reading the report. We hope you are ready for your big data journey. And we hope too that you make the right strategic choice for locating your big data solution.

ABOUT THE REPORT

Commissioned by Interxion, Vanson Bourne surveyed 750 senior IT decision makers at companies with more than 500 employees in November and December 2012. There were 150 respondents from the UK and Ireland, and 100 each from Germany, France and Spain, and 50 each from Austria, Switzerland, Belgium, the Netherlands, Denmark and Sweden.

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